Part 1 – Listing of Claims

77. (New) A cushion having an upward facing support contour adapted to interact with a pelvic area anatomy of a person and support the person in a seated position while offloading support pressure from skin covering the ischial tuberosities and the greater trochanters and the coccyx and sacrum while transfering the support pressure to tissue masses on opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones, when the person is seated on and supported by the support contour, wherein:

the support contour includes support areas and relief areas are separate from one another, the support areas are at locations adapted to be adjacent to skin at the tissue masses on the opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones, the relief areas are at locations adapted to be adjacent to skin covering the ischial tuberosities, the greater trochanters and the coccyx and sacrum, and the support areas and the relief areas are spaced relatively more toward and relatively more away from the anatomical shape of the pelvic area of the person when the person is seated on and supported by the support contour,

the cushion and the support contour are formed by an integral piece of resilient support material having the necessary resilience to establish and maintain the support areas and the relief areas in the manner herein recited when the person is seated on and supported by the support contour;

the cushion extends longitudinally from a rear wall to a front edge and extends transversely between opposite transverse edges, each transverse edge extends longitudinally between the rear wall and the front edge, and the rear wall has a general midline contour which represents the anatomical shape of a rear portion of the pelvic area of the person;

the support contour is defined relative to a longitudinal midline which extends midway between the opposite transverse edges, and is further defined relative to the horizontal and the vertical, the horizontal having a component which

extends longitudinally and transversely and the vertical having a component which extends perpendicular to the horizontal;

the support contour includes a cavity forward of the rear wall and extending downward to a lower surface which is adapted to be located beneath the ischial tuberosities when the person is seated on and supported by the support contour;

the lower surface of the cavity constituting an ischial tuberosities relief area which is spaced from the ischial tuberosities to substantially offload pressure and shear force from the skin adjacent to the ischial tuberosities when the person is seated on and supported by the support contour;

the support contour includes two transverse relief areas spaced transversely to the outside of the cavity and which are adapted to be located beneath the greater trochanters when the person is seated on and supported by the support contour, each transverse relief area is spaced vertically above the lower surface of the cavity;

the transverse relief areas each constituting a greater trochanter relief area which is spaced from each greater trochanter to substantially offload pressure and shear force from the skin adjacent to the each greater trochanter when the person is seated on and supported by the support contour;

the support contour includes a channel in the rear wall at a location approximately centered transversely about the longitudinal midline and recessed rearward into the rear wall relative to the midline contour of the rear wall, the channel is adapted to be located behind and transversely to the sides of the coccyx and the sacrum when the person is seated on and supported by the support contour;

the channel constituting a coccyx and sacrum relief area which is spaced sufficiently from the coccyx and sacrum to substantially offload pressure and shear force from the skin adjacent to the coccyx and sacrum when the person is seated on and supported by the support contour;

the support contour including two rear support areas located on the rear wall on respectively opposite transverse sides of the longitudinal midline and between the channel and the greater trochanters relief areas, each rear support area protruding forward relative to the midline contour of the rear wall, each rear support area is adapted to be located adjacent to the skin and tissue masses on opposite lateral sides of the posterior buttocks when the person is seated on and supported by the support contour;

the rear support areas each constituting lateral posterior buttocks support areas which induce upward support pressure on the opposite lateral sides of the posterior buttocks when the person is seated on and supported by the support contour;

two forward support areas located forward of the cavity and spaced transversely on opposite sides of the longitudinal midline, each forward support area located vertically higher than the greater trochanters relief areas, the forward support areas are adapted to be located beneath the proximal thigh bones at a position which is closer to the greater trochanters compared to the location of knee joints on the thigh bones when the person is seated on and supported by the support contour;

the forward support areas constituting proximal thigh support areas which induce upward support pressure while interacting in a fulcrum-like manner with the proximal thigh bones to create elevational force at the hip joints from weight of the distal legs to elevate the greater trochanters relative to the greater trochanter relief areas when the person is seated on and supported by the support contour; and

the upward support pressure induced from the lateral posterior buttocks support areas and from the proximal thigh support areas transferring substantially the entire support pressure to tissue masses on opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones while substantially offloading support pressure from skin covering the ischial tuberosities and the

greater trochanters and the coccyx and sacrum when the person is seated on and supported by the support contour.

78. (New) A cushion as defined in claim 77, wherein:

the locations of the proximal thigh support areas establish a lever-like mechanical advantage for increasing the amount of elevational force at the hip joints from the weight of the distal legs.

79. (New) A cushion as defined in claim 77, wherein:

the channel has a V-shaped curvature of increasing transverse width with increasing vertical height above the lower surface of the cavity.

80. (New) A cushion as defined in claim 77, wherein:

the support pressure from the lateral posterior buttocks support areas prevents the pelvic area from tipping backward in response to the elevational force at the hip joints.

81. A cushion as defined in claim 77, wherein:

the upward support pressure induced from the rear support areas and from the proximal thigh support areas also facilitate postural alignment and stabilization of the pelvic area against forward and backward and lateral side to side movement when the person is seated on and supported by the support contour.

82. (New) A cushion as defined in claim 77, wherein:

the ischial tuberosities relief area and the greater trochanters relief areas and the coccyx and sacrum relief area are of sufficient size to offload pressure from the skin covering the ischial tuberosities and the greater trochanters and the coccyx and sacrum during normal forward and backward pivoting movement of the pelvic area and an upper torso of the person when seated on and supported by the support contour.

83. (New) A cushion as defined in claim 77, wherein:

the support contour includes a clearance area extending upward and forward from the lower surface of the cavity and approximately centered about the longitudinal midline, the clearance area adapted to be located adjacent to a

perineal area of the person when seated on and supported by the support contour, the clearance area establishing space for air circulation at the perineal area.

84. (New) A cushion as defined in claim 83, wherein:

the integral piece of support material comprises a matrix of resilient adhered-together plastic beads having spaces between the beads to establish permeability for air movement within the integral piece of support material.

85. (New) A cushion as defined in claim 84 for use on a wheelchair.

86. (New) A method of configuring a support contour of a cushion to adapt the support contour to interact with a pelvic area anatomy of a person and support the person in a seated position to offload support pressure from skin covering the ischial tuberosities and the greater trochanters and the coccyx and sacrum while transfering substantially the entire support pressure to tissue masses on opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones, when the person is seated on and supported by the support contour, comprising:

defining support areas and relief areas of the support contour which are separate from one another;

locating the support areas at locations on the support contour which are adapted to be adjacent to skin at the tissue masses on the opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones when the person is seated on and supported by the support contour;

locating relief areas at locations on the support contour which are adapted to be adjacent to skin covering the ischial tuberosities, the greater trochanters and the coccyx and sacrum;

spacing the support areas relatively closer to the tissue masses on the opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones and spacing the relief areas relatively further away from the skin covering the ischial tuberosities and the greater trochanters and the coccyx and sacrum;

forming the support areas and the relief areas on an integral piece of resilient support material having the necessary resilience to establish and maintain the support areas and the relief areas in the manner herein recited when the person is seated on and supported by the support contour;

orienting the support areas on the opposite lateral sides of the posterior buttocks to induce an upward component of support pressure on the tissue masses on the opposite lateral sides of the posterior buttocks when the person is seated on and supported by the support contour;

locating the support areas beneath the proximal thigh bones closer to hip joints than to knee joints of the thigh bones when the person is seated on and supported by the support contour; and

elevating the support areas beneath the proximal thigh bones relative to the relief areas below the greater trochanters to establish fulcrums from which an upward component of elevational force is induced by the thigh bones at the hip joints from weight of the distal legs interacting in a lever-like manner with the support areas beneath the proximal thigh bones while the support pressure is applied from the support areas beneath the proximal thigh bones when the person is seated on and supported by the support contour; and wherein:

the support areas at the posterior lateral buttocks and the support areas beneath the proximal thigh bones transfer substantially the entire support pressure to tissue masses on opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones while the relief areas substantially offload support pressure from skin covering the ischial tuberosities and the greater trochanters and the coccyx and sacrum when the person is seated on and supported by the support contour.

87. (New) A method as defined in claim 86, wherein:

shaping the coccyx and sacrum relief area in an upright V-shape having increasing transverse width with increasing vertical height.

88. (New) A method as defined in claim 86, wherein:

the relief areas are of sufficient size to offload support pressure from the skin covering the ischial tuberosities and the coccyx and sacrum during forward and backward pivoting movement of the pelvic area and an upper torso of the person when seated on and supported by the support contour.

89. (New) A method as defined in claim 86, wherein:

orienting the support areas beneath the posterior lateral buttocks to induce support pressure to prevent the pelvic area from tipping backward in response to the elevational force at the hip joints when the person is seated on and supported by the support contour.

90. (New) A method as defined in claim 86, wherein:

defining a clearance area adapted to be located adjacent to a perineal area of the person when seated on and supported by the support contour, the clearance area establishing space for air circulation at the perineal area when the person is seated on a supported by the support contour.

91. (New) A method as defined in claim 86, wherein:

the integral piece of support material is a matrix of resilient adhered-together plastic beads having spaces between the beads to establish permeability for air movement within the integral piece of support material.

92. (New) A method as defined in claim 91, wherein the cushion is for use on a wheelchair.

93. (New) A method of supporting a person on a support contour of a cushion in a seated position, the support contour adapted to interact with a pelvic area anatomy of the person and support the person in the seated position while offloading support pressure from skin covering the ischial tuberosities and the greater trochanters and the coccyx and sacrum of the pelvic area of the person and while transfering substantially support pressure to tissue masses on opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones when the person is seated on and supported by the support contour, comprising:

contacting support areas of the support contour with skin at the tissue masses on the opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones;

transferring support pressure to support the person from the support contour in the seated position from the support areas to the skin and tissue masses contacted by the support areas;

locating relief areas of the support contour adjacent to skin covering the ischial tuberosities, the greater trochanters and the coccyx and sacrum;

spacing the relief areas to substantially offload support pressure and shear force from the skin covering the ischial tuberosities, the greater trochanters and the coccyx and sacrum;

using an integral piece of resilient support material having the necessary resilience to establish and maintain the support areas in the relief areas in the manner herein recited;

inducing an upward component of support pressure on the tissue masses on the opposite lateral sides of the posterior buttocks from the support areas on the opposite lateral sides of the posterior buttocks;

inducing an upward elevational force on the pelvic area from the thigh bones at the hip joints caused by weight of the distal legs interacting in a lever-like manner with the support areas beneath the proximal thigh bones while simultaneously applying support pressure from the support areas beneath the proximal thigh bones;

transferring substantially the entire support pressure from the support areas to the tissue masses on opposite lateral sides of the posterior buttocks and beneath the proximal thigh bones; and

offloading any substantial support pressure from skin covering the ischial tuberosities and the greater trochanters and the coccyx and sacrum.

94. (New) A method as defined in claim 93, further comprising:

substantially eliminating any support pressure on the skin surrounding the ischial tuberosities and the coccyx and the sacrum during an anticipated range of normal forward and backward and side to side movement of the pelvic area and an upper torso of the person.

95. (New) A method as defined in claim 93, further comprising:

inducing upward support pressure from the support areas at the lateral posterior buttocks to prevent the pelvic area from tipping backward in response to the elevational force at the hip joints.

96. (New) A method as defined in claim 93, further comprising:

inducing the upward support pressure from the support areas to facilitate postural alignment and stabilization of the pelvic area against forward and backward and lateral side to side movement.

97. (New) A method as defined in claim 93, further comprising:

providing a clearance area of the support contour which is adapted to be located adjacent to a perineal area of the person when seated on and supported by the support contour; and

establishing space at the clearance area for air circulation to the perineal area.

98. (New) A method as defined in claim 93, further comprising:

using as the support material a matrix of resilient adhered-together plastic beads having spaces between the beads to establish permeability for air movement in the support material.

99. (New) A method as defined in claim 98, further comprising:

using the cushion on a wheelchair.